

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

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|----------------------------------|---|---------------------|
| In the Matter of |) | |
| |) | |
| Call Authentication Trust Anchor |) | WC Docket No. 17-97 |
| |) | |
| Exemption from Caller ID |) | WC Docket No. 20-68 |
| Authentication Requirements |) | |

**CERTIFICATION OF STIR/SHAKEN EXEMPTION FROM SCOTT MULLEN –
BANDWIDTH INC.’S CHIEF TECHNICAL OFFICER**

In my capacity of Chief Technical Officer (“CTO”) of Bandwidth Inc. and its wholly-owned subsidiary Bandwidth.com CLEC, LLC (“Bandwidth”), I have personal knowledge of Bandwidth’s network functionality and technical capabilities associated with its Internet Protocol (“IP”)-based voice services and hereby certify under penalty of perjury that Bandwidth has voluntarily developed and implemented the STIR/SHAKEN technical framework in advance of the otherwise established compliance deadline of June 30, 2021 of the TRACED Act.¹ Accordingly, pursuant to the Commission’s *Second Caller ID Authentication Report and Order*², on behalf of Bandwidth and in conjunction with the attached supporting statement below, I request the Commission’s acceptance and approval of this certification as recognition that Bandwidth has met the Commission’s established criteria for the TRACED Act’s required STIR/SHAKEN implementation at this time.

Specifically, for the voice services supported on its all-IP network, I certify that

¹ Pallone-Thune Telephone Robocall Abuse Criminal Enforcement and Deterrence Act, Pub. L. No. 116-

² Call Authentication Trust Anchor, WC Docket No. 17-97, Second Report and Order, FCC 20-136, at para. 117- 125 (Oct. 1, 2020) (*Second Caller ID Authentication Report and Order*).

Bandwidth has: (i) “completed the network preparations necessary to deploy the STIR/SHAKEN protocols on its network including, but not limited to, by participating in test beds and lab testing, or completing commensurate network adjustments to enable the authentication and validation of calls on its network consistent with the STIR/SHAKEN framework”;³ (ii) “demonstrated its voluntary agreement to participate with other voice service providers in the STIR/SHAKEN framework by completing formal registration (including payment) and testing with the Policy Administrator”;⁴ (iii) “completed the necessary network upgrades to at least one network element (e.g., a single switch or session border controller) to enable the authentication and verification of caller ID information consistent with the STIR/SHAKEN standards”;⁵ and can (iv) “reasonably foresee[] that it will have completed all necessary network upgrades to its network infrastructure to be able to authenticate and verify caller ID information for all SIP calls exchanged with STIR/SHAKEN-enabled partners by June 30, 2021.”⁶

HEREBY SWORN and ATTESTED UNDER PENALTY OF PERJURY THIS 1st Day of December, 2020:

/s/ Scott Mullen

Scott Mullen
Chief Technical Officer
Bandwidth Inc.
900 Main Campus Dr., Venture III
Raleigh, NC 27606
smullen@bandwidth.com

³ *Id.* at 54, para. 107.

⁴ *Id.* at 55, para. 109.

⁵ *Id.* at 56, para. 111.

⁶ *Id.* at 56-57, para. 113.

**FURTHER STATEMENT IN SUPPORT OF THE EXEMPTION
CERTIFICATION OF BANDWIDTH'S CTO SCOTT MULLEN**

In accordance with the TRACED Act, the Federal Communications Commission ("FCC" or "Commission") has adopted rules requiring voice service providers to implement STIR/SHAKEN in the Internet Protocol (IP) portions of their network.⁷ Further in keeping with the TRACED Act, the Commission has also determined that eligible service providers may received exemptions from the otherwise established compliance deadline by voluntarily deploying STIR/SHAKEN in their voice services and the networks supporting them in advance of the established compliance deadline of June 30, 2021. To receive an exemption for its IP-based networks and services the Commission has determined that a voice service provider must demonstrate that it has met each of the four prongs established in its *Second Caller ID Authentication Report and Order*.⁸

Bandwidth has developed a number of systems, processes and procedures to help protect its customers and the broader communications industry ecosystem from the harms of illegal robocalling, including the successful implementation of the STIR/SHAKEN technical framework that meet the Commission's established criteria. In order to demonstrate its eligibility for the voluntary exemption as envisioned by the TRACED Act, Bandwidth provides the following additional factual support to its preceding CTO Certification above for each of the four prongs of the Commission's eligibility requirements:

- Prong 1:

Bandwidth has been a pioneering leader in the industry by engaging with other carriers to test and deploy the STIR/SHAKEN framework in a number of direct IP traffic exchange

⁷ *Call Authentication Trust Anchor; Implementation of TRACED Act Section 6(a)—Knowledge of Customers by Entities with Access to Numbering Resources*, WC Docket Nos. 20-67 and 17-97, Report and Order and Further Notice of Proposed Rulemaking, FCC 20-42, at 12, para. 24 (Mar. 31, 2020).

⁸ *Second Caller ID Authentication Report and Order* at paras. 106-113.

scenarios. As a result, Bandwidth is able to demonstrate that it has “completed the network preparations necessary to deploy the STIR/SHAKEN protocols on its network”⁹ on a voluntary basis in advance of the FCC’s compliance deadline of June 30, 2021 in accordance with the first requirement of the Commission’s exemption qualifications. Bandwidth’s public announcements of such successful interoperability results in a number of press releases demonstrate its satisfactory completion of this Prong 1. (See e.g.:

<https://investors.bandwidth.com/news-releases/news-release-details/bandwidth-finalizes-stirshaken-interoperability-t-mobile-legacy> ; <https://investors.bandwidth.com/news-releases/news-release-details/bandwidth-partners-comcast-reduce-robocalling-stirshaken-call> ; <https://investors.bandwidth.com/news-releases/news-release-details/bandwidth-announces-successful-stirshaken-interop-t-mobile> ; <https://investors.bandwidth.com/news-releases/news-release-details/bandwidth-announces-successful-implementation-stirshaken-call>)

- Prong 2:

In addition to the testing and deployment done with other service providers as detailed above with regard to Prong 1, as of July 30, 2020 Bandwidth also formally and successfully “demonstrated its voluntary agreement to participate with other voice service providers in the STIR/SHAKEN framework by completing formal registration (including payment) and testing with the Policy Administrator.”¹⁰ Together with its chosen certificate authority provider (STI-CA) Neustar, Bandwidth completed all the necessary procedures with the designated STI-PA, iconectiv, and is currently listed as a participant in good standing on iconectiv’s published list of STIR/SHAKEN authorized service providers. (See: <https://authenticate.iconectiv.com/authorized-service-providers-authenticate>).

⁹ *Id.* at 54, para. 107.

¹⁰ *Id.* at 55, para. 109.

- Prong 3:

In order to satisfy the technical and operational requirements necessary to satisfy the activity detailed above for both Prongs 1 and 2, Bandwidth was required to “complete[] the necessary network upgrades to [its all-IP network] to enable the authentication and verification of caller ID information consistent with the STIR/SHAKEN standards.”¹¹ In order to be in a position to engage in interoperability testing and deployment to ultimately successfully support STIR/SHAKEN with the carriers it has established direct IP traffic exchange arrangement with, Bandwidth had to develop and deploy software upgrades to its core network switching infrastructure and its production network capabilities. Among other upgrades necessary, Bandwidth’s efforts included integrating third-party authentication and validation functionality for both its in-bound and out-bound calling capabilities as well.

- Prong 4:

Finally, Bandwidth continues to work to advance its STIR/SHAKEN adoption throughout its network and in conjunction with other carrier’s networks as well. For example, and among other on-going efforts, Bandwidth is presently engaged in the work necessary to support STIR/SHAKEN as an intermediate provider of voice services and can “reasonably foresee[] that it will have completed all necessary network upgrades to its network infrastructure to be able to authenticate and verify caller ID information for all SIP calls exchanged with STIR/SHAKEN-enabled partners by June 30, 2021.”¹²

Further demonstrating its active participation and leadership in industry organizations and their critical industry efforts aimed at stopping illegal robocalling, in addition to its successful implementation of the fundamental components of the STIR/SHAKEN framework detailed

¹¹ *Id.* at 56, para. 111.

¹² *Id.* at 56-57, para. 113.

above, Bandwidth also remains focused on ensuring that illegal robocall prevention will coexist with the continuation of effective traffic delivery of legal calls across the communications ecosystem as a whole. Ensuring the on-going non-discriminatory exchange of wanted traffic across a wide range of competing communications services in the marketplace will require operational vigilance and may also depend critically upon wide-spread recognition and adoption of a recently approved set of additional supplemental STIR/SHAKEN commonly referred to as “Certificate Delegation.”¹³ As an underlying IP-based provider of wholesale services to a wide array of innovative service provider customers large and small, Bandwidth is actively engaged with other leading industry service providers to continue to improve and refine the fundamental STIR/SHAKEN framework by supporting the recently approved additional ATIS standards for Certificate Delegation.¹⁴ Bandwidth believes that the Certificate Delegation standards will be an important component to combating abusive robocalling while simultaneously protecting the myriad valid reseller models that embrace competitive IP-enabled services against the real risks of having wanted end-user services improperly blocked or discriminated against.

CONCLUSION

Based upon the foregoing Certification of Scott Mullen together with this Further Statement of Support from Bandwidth above, Bandwidth hereby respectfully requests the Commission’s approval of an exemption from the June 30, 2021 STIR/SHAKEN implementation deadline for its IP-enabled network and services pursuant to its *Second Caller ID Authentication Report and Order*.

¹³ See: ATIS-1000092, “Signature-based Handling of Asserted information using toKENs (SHAKEN): Delegate Certificates.” (“Certificate Delegation”).

Respectfully submitted,

/s/ Greg Rogers

Greg Rogers
Head of Global Policy and Regulatory Affairs
Bandwidth Inc.
900 Main Campus Dr., Venture III
Raleigh, NC 27606
grogers@bandwidth.com

Its Attorney

November 30, 2020